
A Steps towards the bright future

Learnomate Technologies is the Information technology company which provide training on different IT Technologies.

Out of that **Docker & Kubernetes** is the one of the fastest growing technology in devops filed.

Docker is a popular platform used for containerization. It allows developers to package applications and their dependencies into lightweight containers that can run consistently across different environments.

Kubernetes is widely used in modern cloud-native application development and is known for its scalability, reliability, and flexibility

COURSE OBJECTIVES

- Understand Containerization Concepts
- Master Docker Fundamentals
- Explore Docker Orchestration with Kubernetes
- Deploy Containerized Applications
- Manage Containerized Environments
- Security Best Practices
- Explore Advanced Kubernetes Features
- Hands-On Labs and Projects



SYLLABUS POINTS

DOCKER SYLLABUS

Module 1: Docker concepts and terms

- Introduction
- Containerization vs Virtualization
- Terminologies in Docker world
- Docker Architecture
- Docker Machine
- Configuring Docker engine

Module 2: Docker Containers

- Creating containers
- Running containers
- Running containers in background
- Connecting containers
- Docker Images

Module 3: Provisioning Docker Image

- Introduction
- Containerization vs Virtualization
- Terminologies in Docker world
- Docker Architecture
- Docker Machine
- Configuring Docker engine

Module 4: Diving Deeper into Dockerfile

- The Build cache
- Dockerfile and Layers
- Building a Web Server Container
- The CMD Instruction Docker



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- The ENTRYPOINT Instruction
- The ENV Instruction
- Volumes and the VOLUME Instruction

Module 5: Working with Registry

- Module Intro
- Creating a Public repo on Docker Hub
- Using our Public repo on Docker Hub,
- Using a Private Registry,
- Docker Hub Enterprise

Module 6: Docker Networking

- Module Intro
- The docker0 Bridge
- Virtual Ethernet Interfaces
- Network Configuration Files
- Exposing Ports
- Viewing Exposed Ports
- Linking Containers

KUBERNETES

Module 1: Kubernetes Core

- Architecture
- Components
- Objectives
- Kubectl

Module 1: Pod

- Overview
- Lifecycle Probes,
- Init Containers
- Topology



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Module 3: Pod - Advance

- Patterns - sidecar,
- Adapter Jobs,
- CronJob Labels,
- Selectors and Annotation

Module 4: Scalability

- Deployment
- Rolling Updates
- Rollbacks
- Auto Scaling

Module 5: Persistence

- Persistence Volume
- Persistence Volume Claim
- Statefulset
- Daemonset

Module 6: Configuration

ConfigMaps

Secrets

Security Contexts

Accounts

Module 7: Scheduling

- Node Name
- Node Selector
- Affinity
- Taints and Toleration
- Toleration



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Module 8: Service and Networking

- ClusterIP
- NodePort
- LoadBalancer
- Ingress

Module 9: Monitoring

- Dashboard
- Logging and Debugging
- Port Forwarding
- Tips for CKA and CKAD

COURSE DETAILS

- **Duration: 2 Months**
- **Online Training available**



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TRAINING HIGHLIGHTS

- Recording Access shared to students on Learnomate App
- Professional Resume building by Industrial working mentors
- Placement assistance/Job requirement notification support/HR contacts
- Training Certificate: Receive a recognized certificate upon course completion
- LinkedIn, [Naukri.com](https://www.naukri.com) Profile: Enhance your online presence with professionally curated profiles.
- Flexible Learning Options: Choose between offline and online training to suit your schedule.
- Interview Preparation, Mock Interviews: Nail your interviews with our tailored preparation and mock interview sessions
- Real-time Scenarios Explained: Learn through practical examples to master real-world applications.
- **?** Doubt Sessions: Clarify your doubts through dedicated doubt-clearing sessions.



CONTACT DETAILS

If you required any further information, please fill free to contact us.

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